

U.S. NATIONAL ARCHIVES

CONSERVATION WORKING GUIDELINES¹ FOR LIGHT EXPOSURE IN EXHIBITIONS AND LOANS

National Archives practice is to allow no more than 12 months exhibition at 50 lux every 10 years in order to preserve the item for viewing by future generations. As a means of limiting cumulative light exposure, very light sensitive objects should be exhibited for no more than 50,000 lux hours per year and moderately light sensitive objects no more than 200,000 lux hours per year¹.

CATEGORY	EXPOSURE LIMIT	ILLUMINATION OPTIONS
Very Light Sensitive	Less than 50,000 lux hours (5,000 footcandle hours) per exhibition	90 days at 50 lux <i>or</i> 45 days at 100 lux <i>for</i> 10 hours per day
Moderately Light Sensitive	Less than 200,000 lux hours (20,000 footcandle hours) per exhibition	365 days at 50 lux 182 days at 100 lux 10 hours per day

The National Archives conservation guidelines for light exposure developed by Catherine Nicholson, are based on research by Robert Feller on the fading of ISO Blue Wool standards.² The guideline for very light sensitive materials is directly based on Feller's Class C, Unstable or Fugitive Materials with approximate equivalent photochemical stability less than BS1006 [blue wool standard] 3.³

These guidelines suggest display for defined periods of time at low light levels and optimal environmental conditions followed by 9 to 10 years of dark storage. Good records of exhibition lengths and dates for individual items are essential for monitoring. These guidelines allow institutions with exhibitions that are no more than 12 months in length to reduce cumulative light damage and give objective criteria for negotiating with exhibit curators and potential borrowers. It is assumed that all ultraviolet radiation is filtered at the light source and/or by use of ultraviolet filtering glazing in frames or exhibit cases.

The guideline for moderately light sensitive material was extrapolated from Feller's research exposing Blue Wool standards in a daylight gallery illuminated at 1.5mlx.h (150,000 footcandle-hours), and assumes that moderately light sensitive material has the approximate equivalent photochemical stability of BS1006 Class 3 to 6, corresponding to Feller's Class B.^{2, 3} It is prudent to assume that all paper based records have at least moderate light sensitivity and when in doubt, to err on the side of safety. In exhibit conservation practice, a choice between two exposure options is much easier to apply than the three options suggested by Feller and others.

¹ Nicholson, C., *What Exhibits Can Do to Your Collection*, Restaurator 13, 95-113, 1992

² Feller, R.L., *Use of the International Standard's Organization's Blue Wool Standards for Exposure to Light. I. Use as an Integrating Light Monitor for Illumination Under Museum Conditions*. AIC Preprints Fort Worth, Texas, 1978, pp.73-79

³ Recommended by the *Report of the study group on care of works of art in traveling exhibitions*. New York: Japan Society. Conference on Cultural and Educational Interchange 1980